

# DAL protocols and radio data

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# Dal services for radio data

- IVOA comitee of science priorities
  - Radio cubes (and visibility data) as a scientific priority after TimeSeries
  - VAO radioastronomy
  - ALMA, SKA
  - Europe : Granada Spanish VO
- DAL ObsTap can help (but limitations to full retrieval)
- DAL SIA2 protocol to serve cubes ( 2009 DAL Internal draft) Discovery/description and Access Data
- DAL DataLink for link to additional resources



## DAL Obstap

- Provides spatial and spectral characterisation (bounds, resolution) for all data types (including spectral cubes)
- Provides Polarisation states list
- Allows full cube retrieval only -→ may be a limitation



## DAL SIA2 (2009 draft)

- Query response describes char (spatial/spectral/pol), curation, a little bit of provenance and WCS
- Better description than SIA1 for images
- AccessData allows fine access modes
  - Polarization selection
  - Subcubes extraction
  - Resampling
  - Position/velocity maps



## DAL SIA2 (2009 draft)

- SIA2 kept relatively silent until last interop. (other priorities: obstap, SED, time series)
- Draft reviewed by radioastronomers (ALMA, JPL) before and during last interop
- Prototypes promised for cubes : CDS, Granada, VAO



# Radio/visibility data: what else ? (discovery/ description)

- More provenance : number of antennas, distances
- UV plane : bounds
- Visibility amplitudes
- FOV, dirty beam ( ... PSF)
- All this available from Charac/provenance. 2 options
  - Extend the SIA query response (uv, vis characterisation)
  - Use DataLink for linkage with additional info



## Data Link: strategy for Radio data

- DataLink = service describing link between datasets (IVOA pubdid) and additional resources
- Link record = pubdid, semantic type, service type , access package
- Three categories of « links »: static, IVOA services, self-described services



## Data Link: strategy for Radio data

- 1 ) Build a full characterisation TAP service, a full provenance TAP service or full observation TAP service (see DM talk)
- 2 ) Create links between radio cubes in SIA2 and this (these) new services... -> DataLink service
- 3 ) Description of visibility char, dirty beams, antenna, etc..
- Prototype in spring (related to SIA2 prototype for cubes)